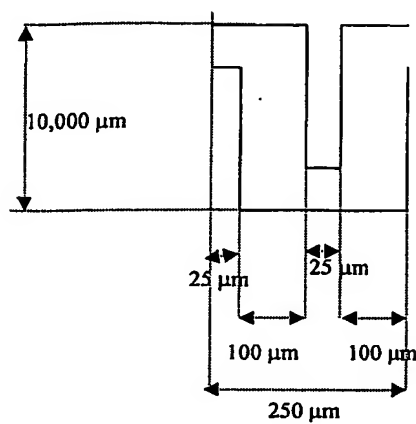


## One embodiment of dilution/reaction chambers



Unit Effective length = 20,050  $\mu\text{m}$

Unit Linear length = 250  $\mu\text{m}$

Unit Fluid volume = 0.2005  $\mu\text{l}$  ( 0.1 x 0.1 x 20.05)

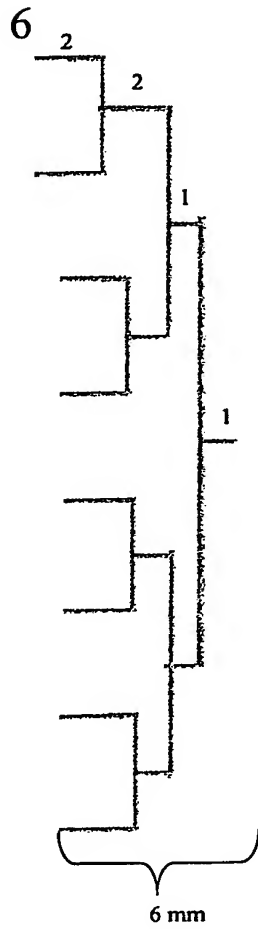
# of Units in 33 mm linear length = 132

Total chamber volume = 26.46  $\mu\text{l}$  (0.2005 x 132)

Fluid Residence Time = 42 seconds @ output flow rate  
of 5  $\mu\text{l}/\text{sec}$  for 8 networks operating in parallel

FIGURE 3

FIGURE 4

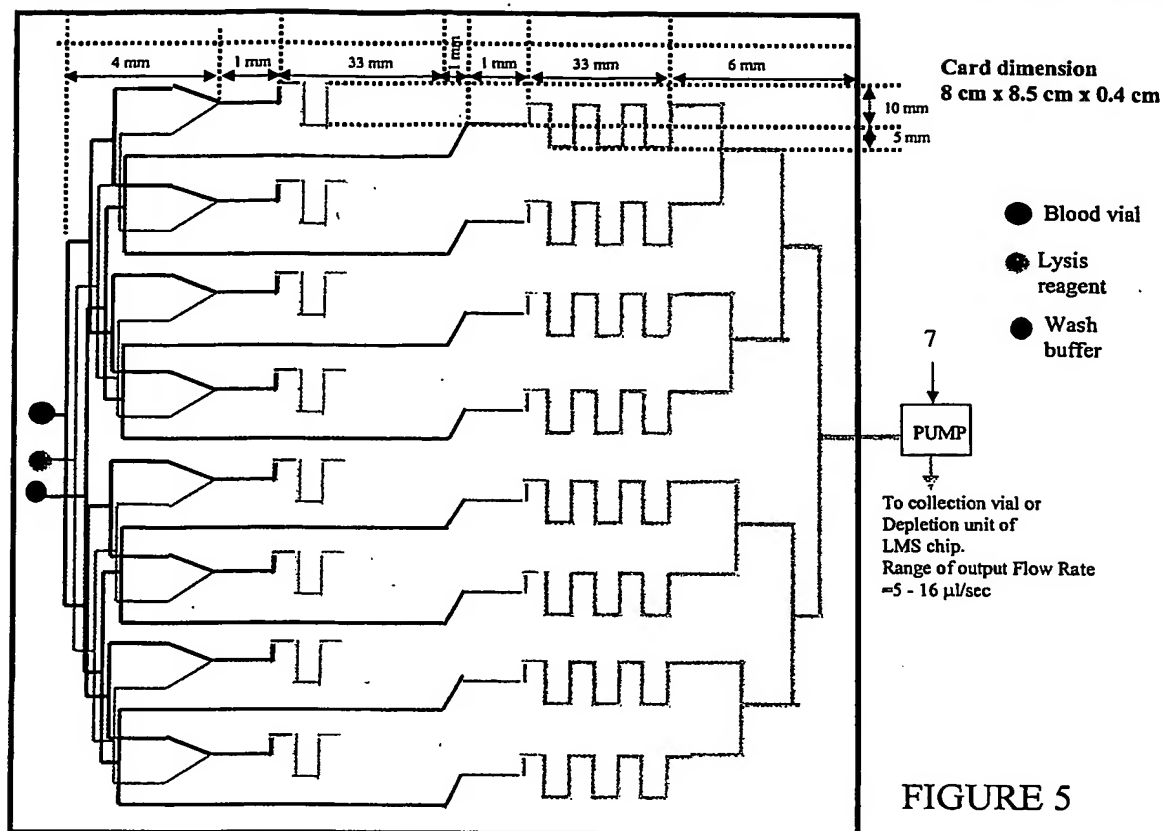


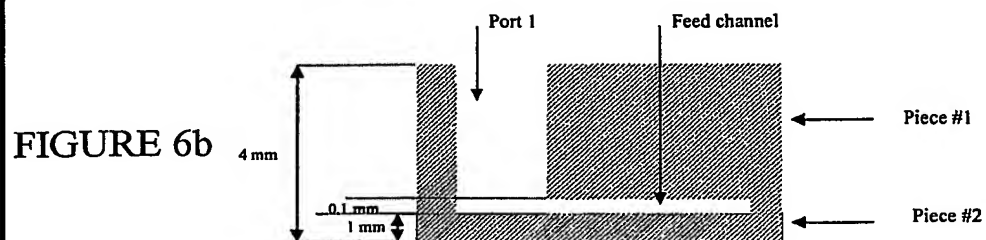
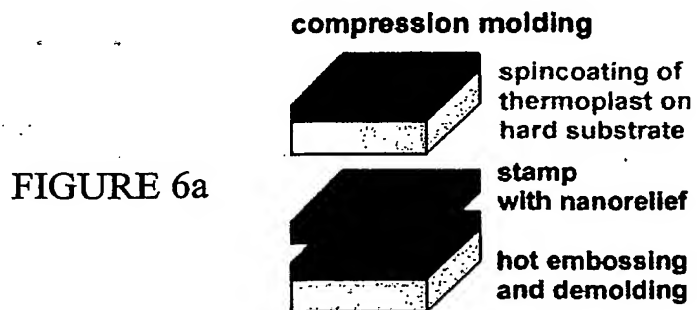
7

PUMP

Peristaltic pump or push-pull  
syringe pump operating in pull  
mode

Channel width= 100 microns, Channel depth= 100 microns







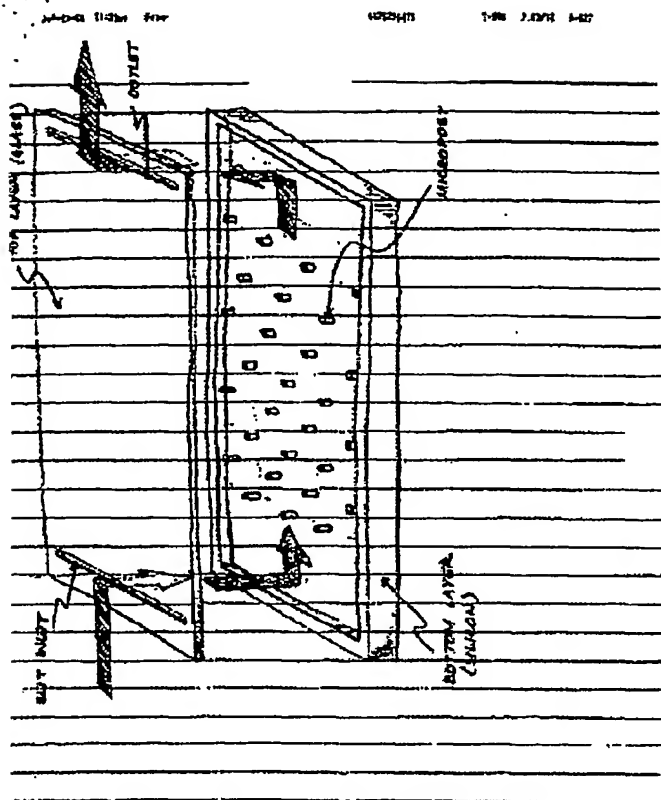


FIGURE 8

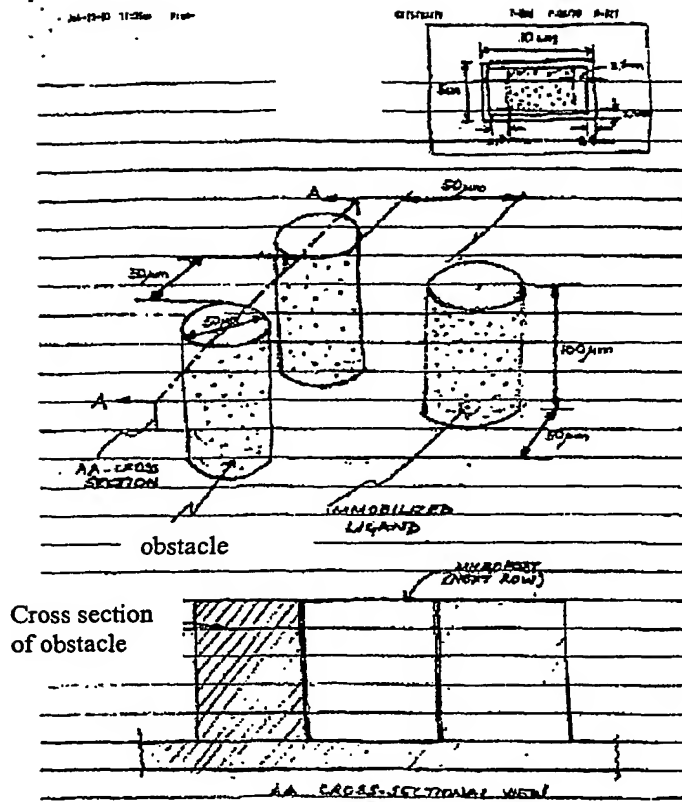


FIGURE 9

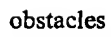


FIGURE 10

FIG. 11A

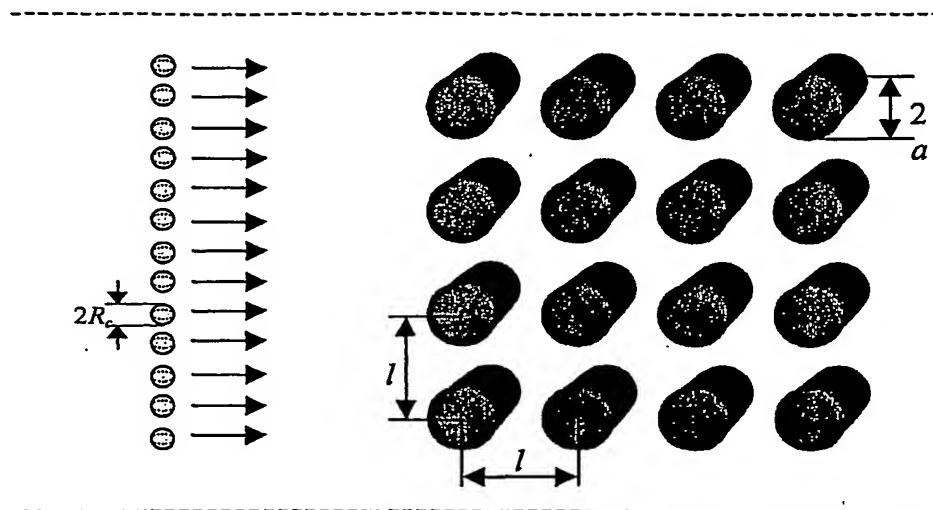


FIG. 11B

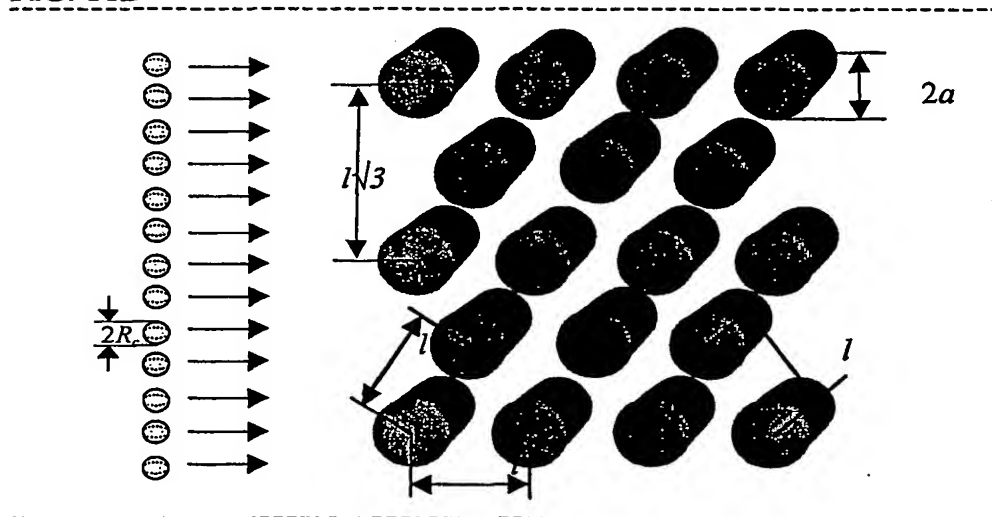


FIG. 12A

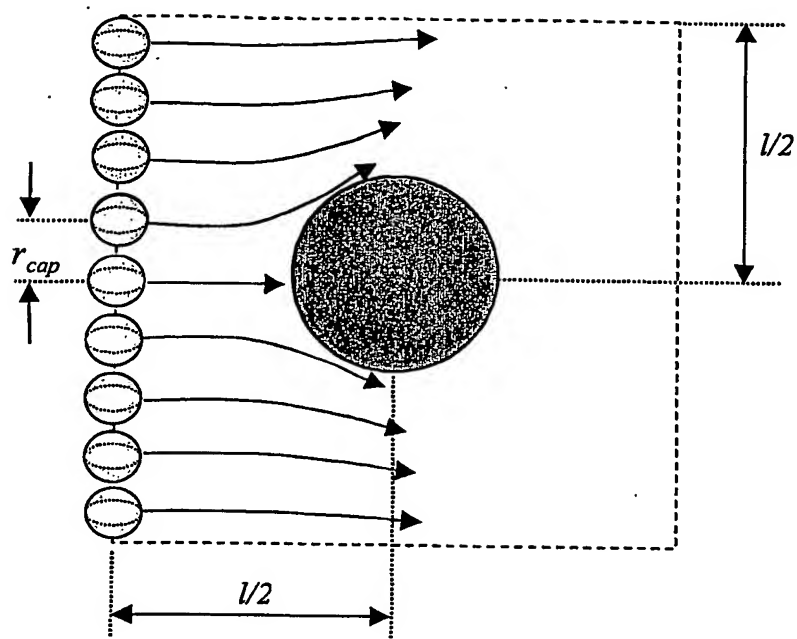
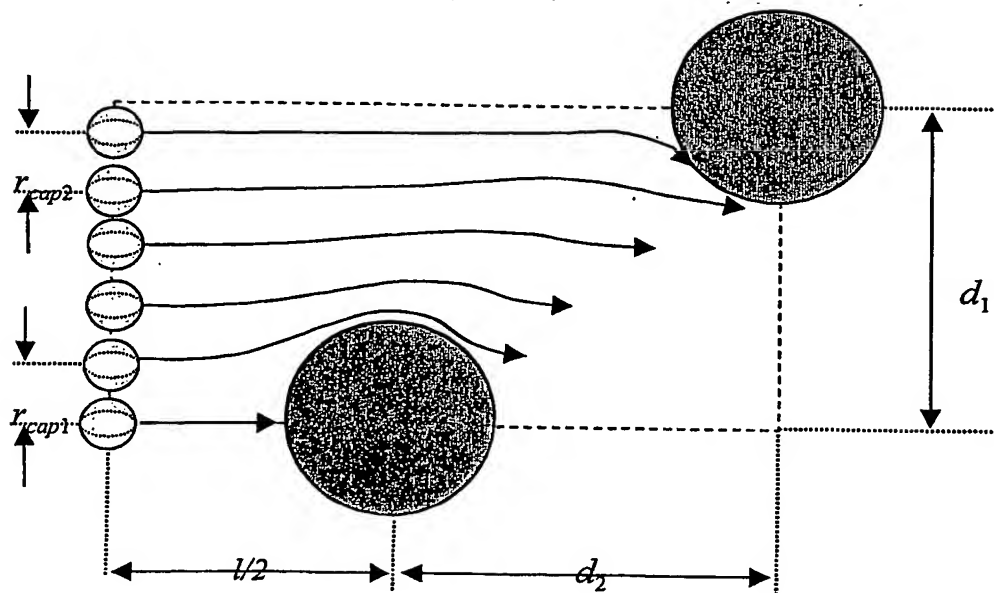
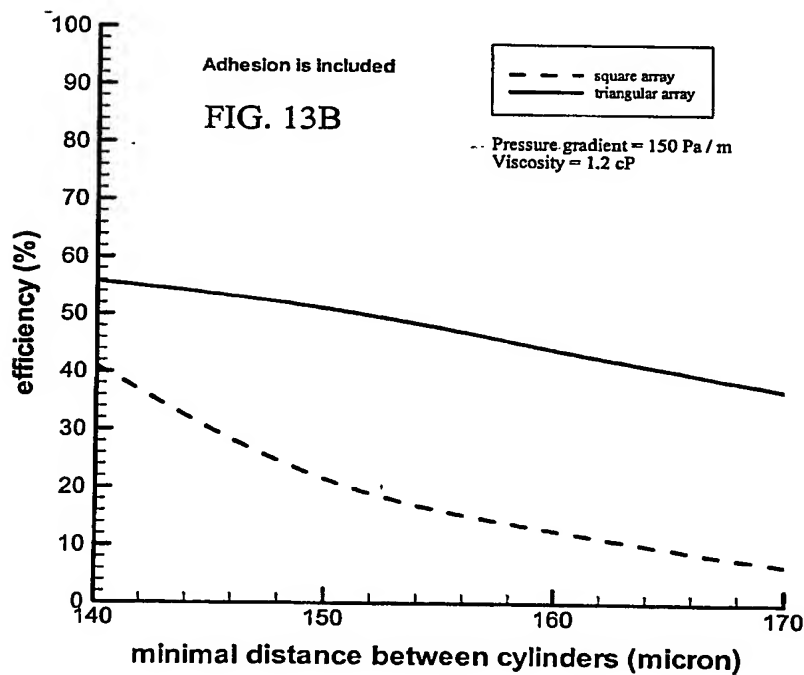
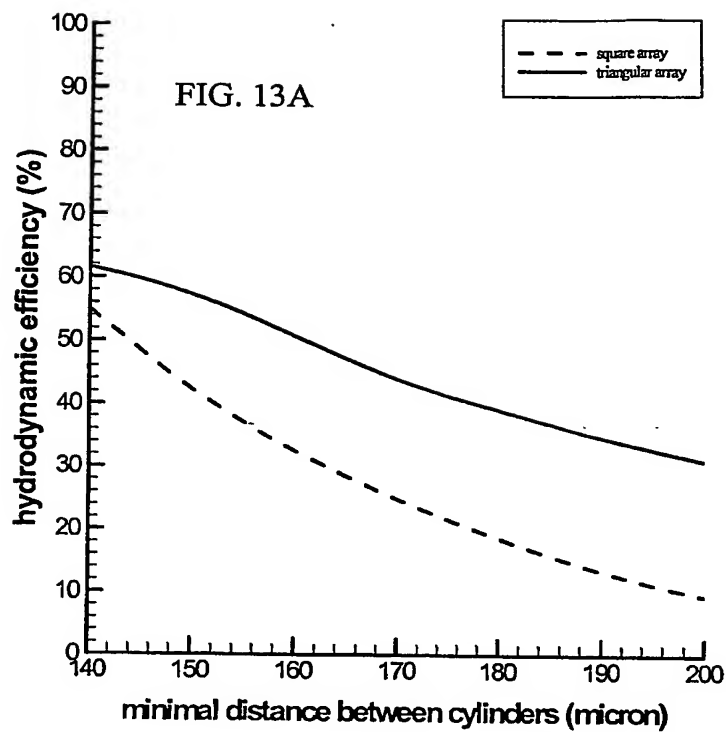


FIG. 12B





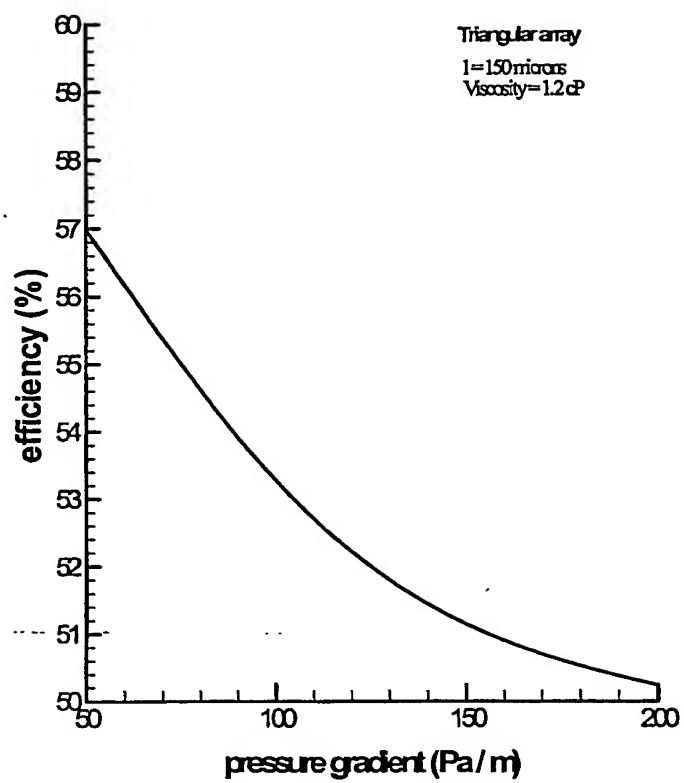


FIG. 14A

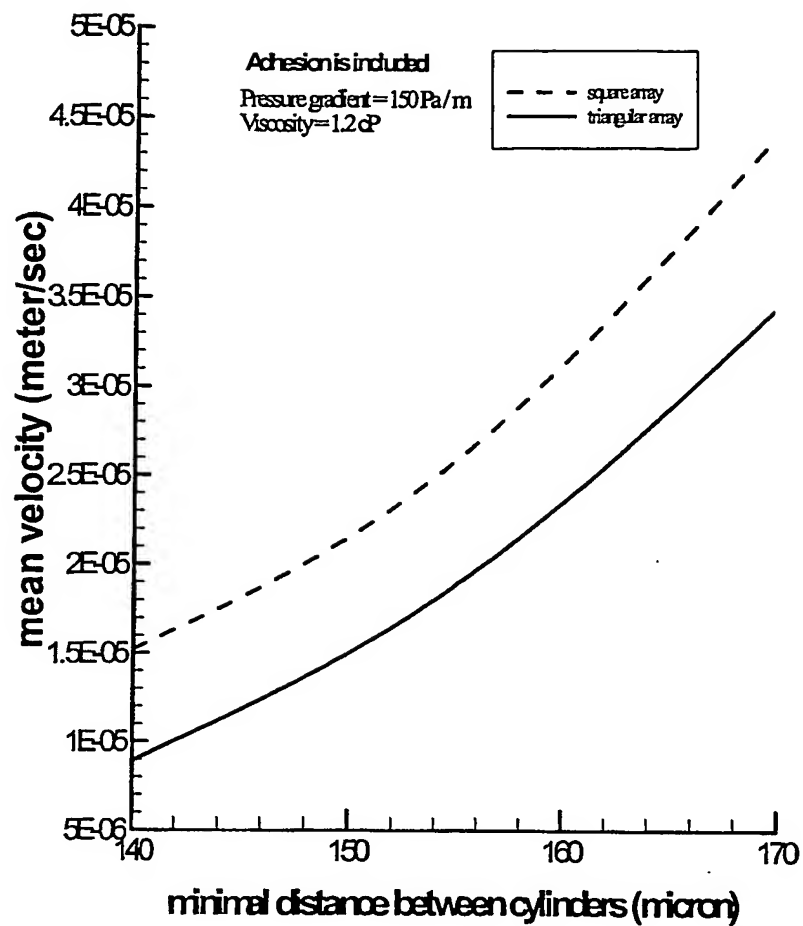


FIG. 14B



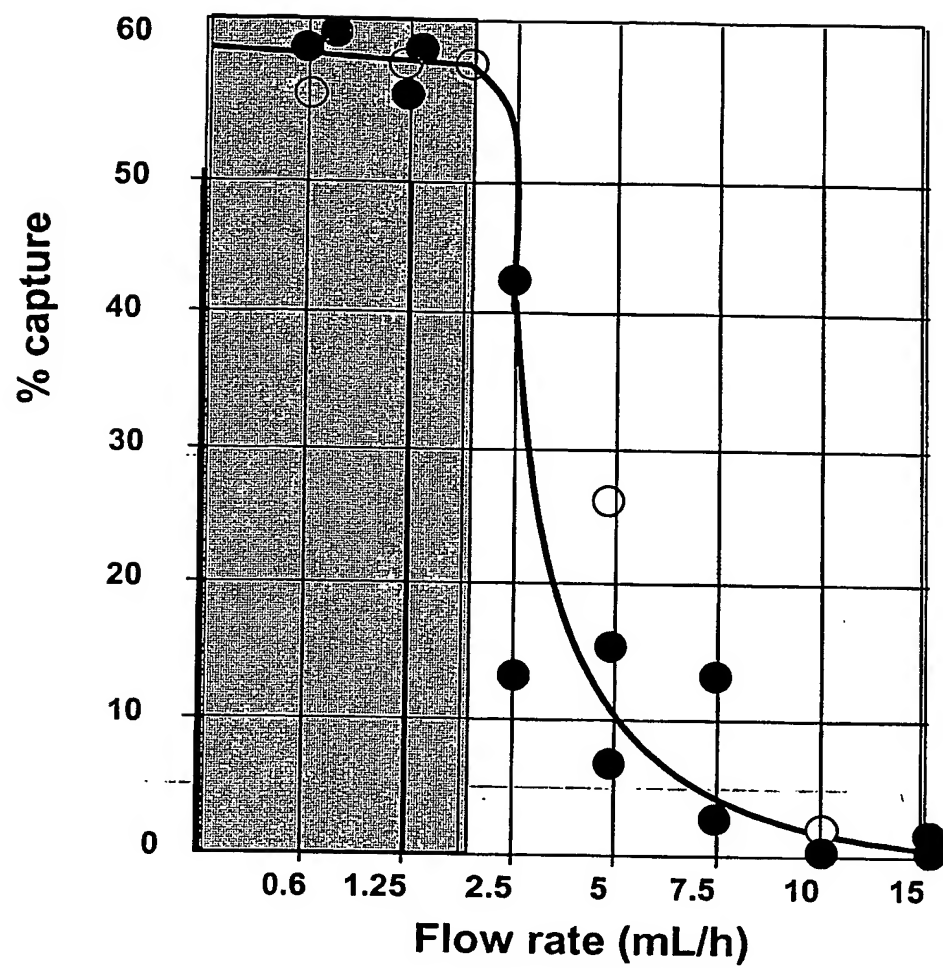
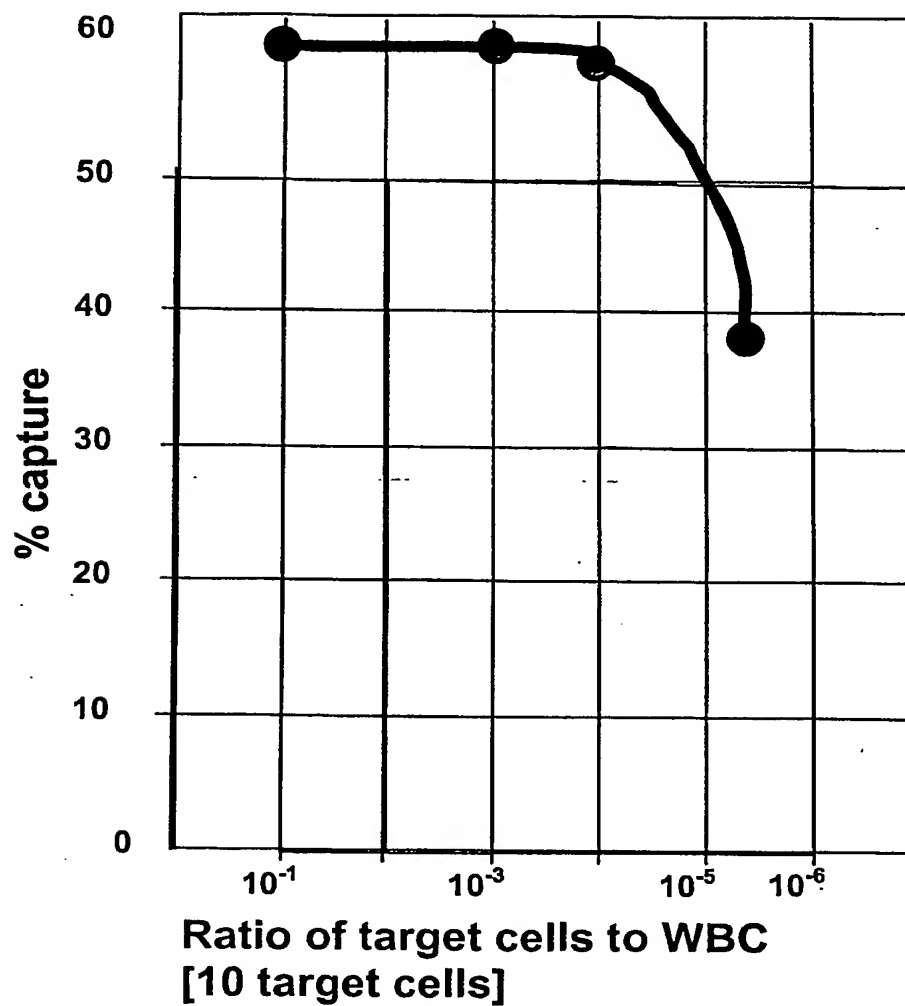


FIG. 16B





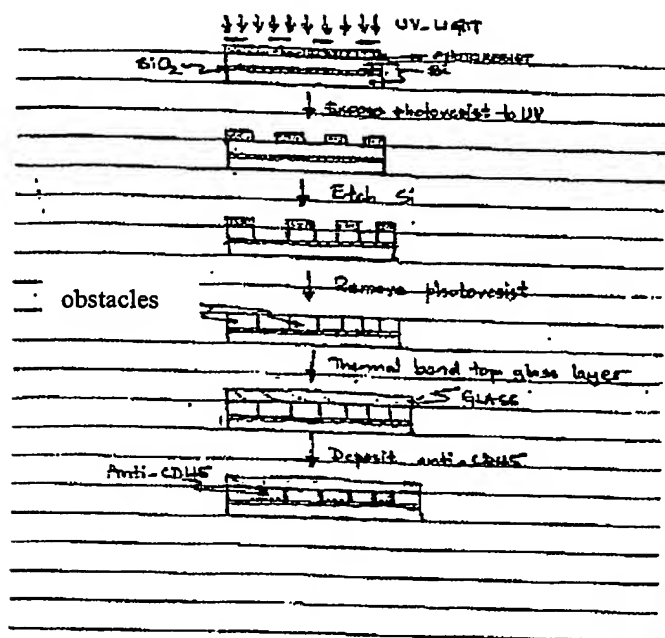


FIGURE 18

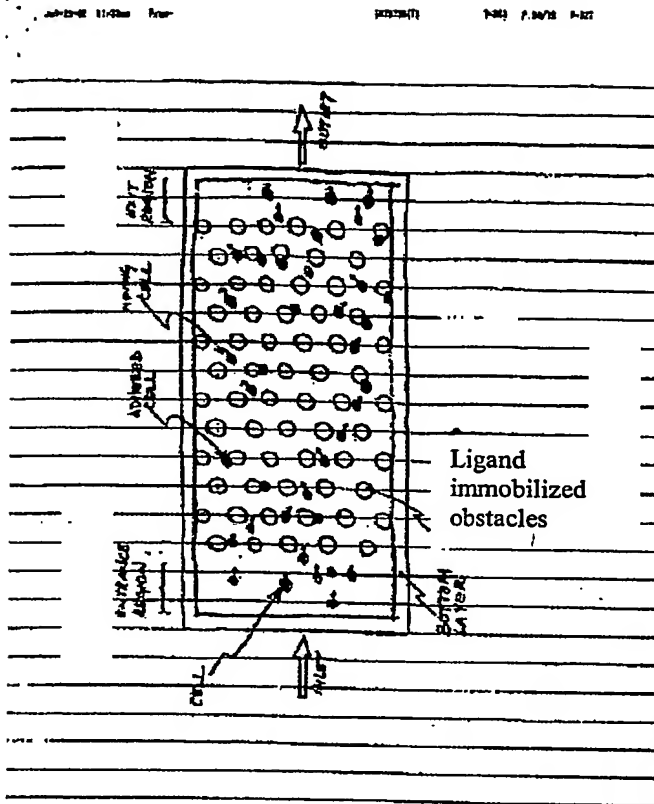
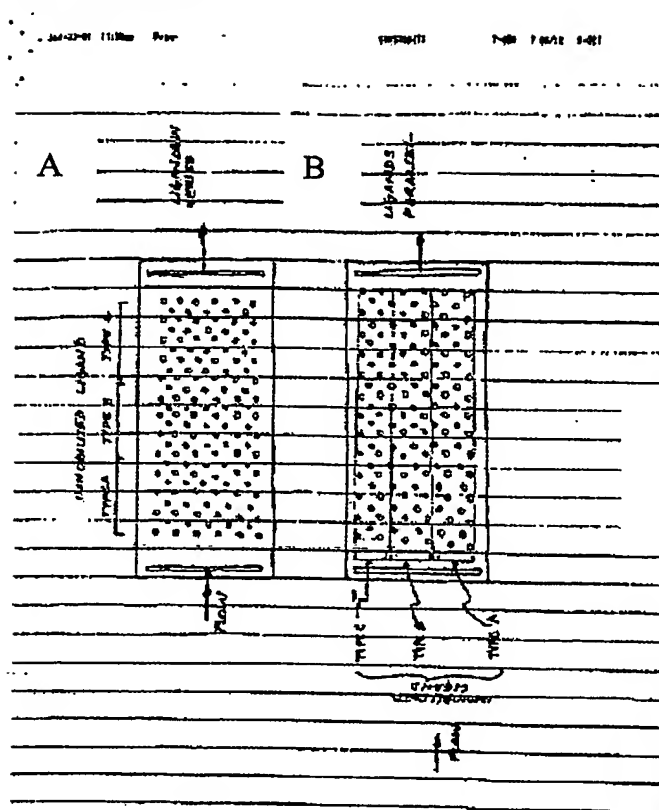


FIGURE 19



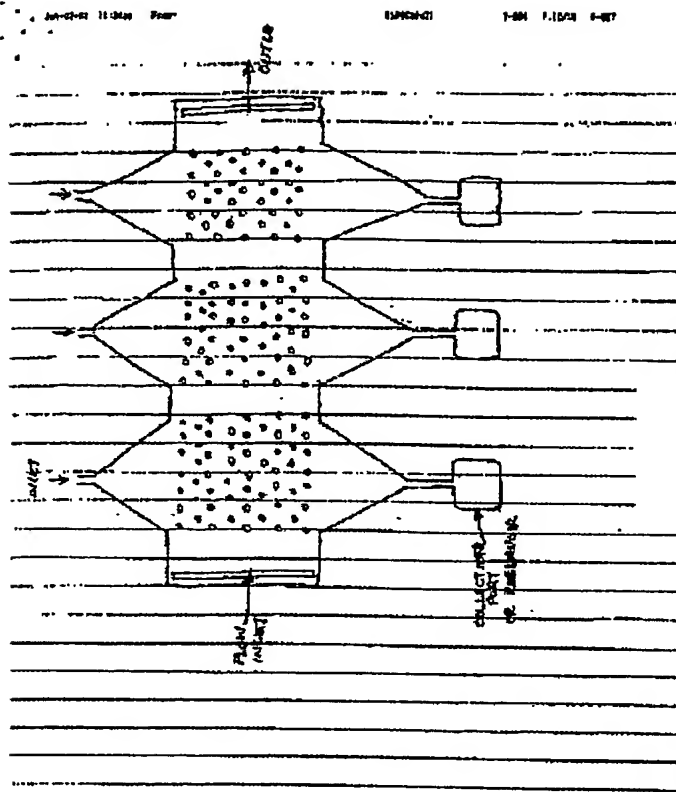
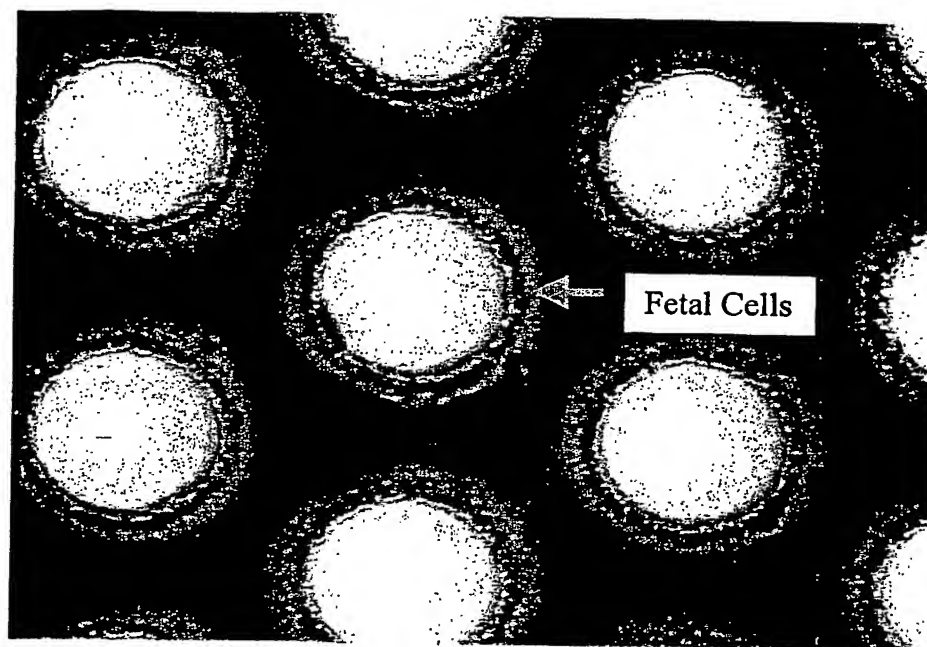
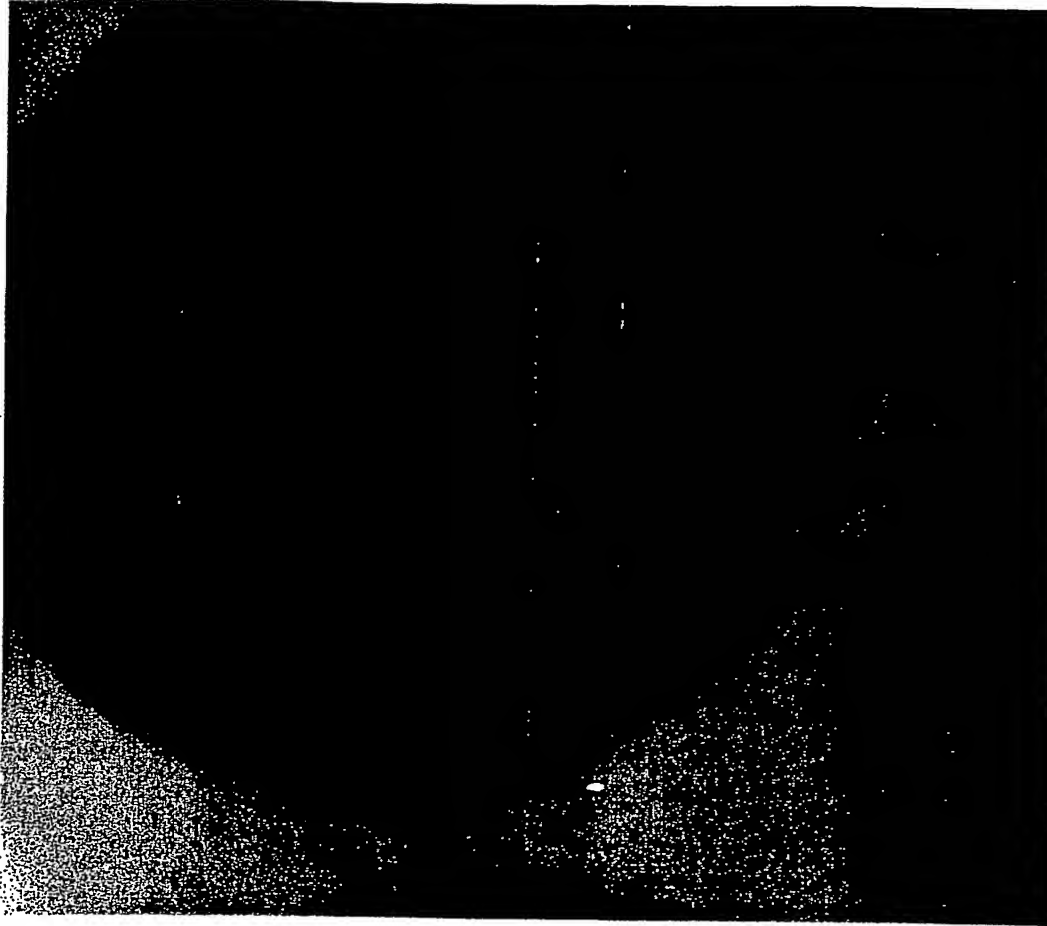
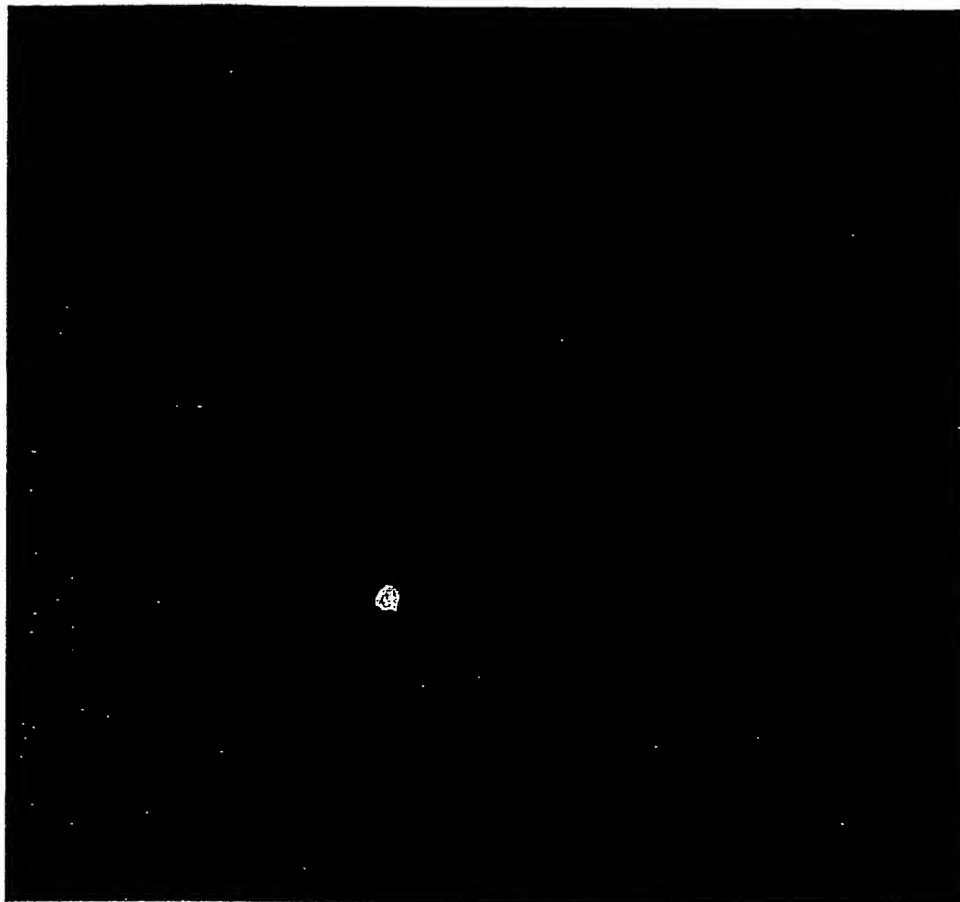


FIGURE 21







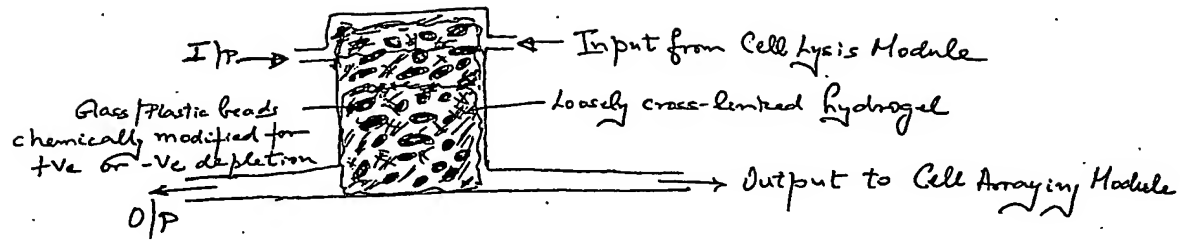


FIGURE 23

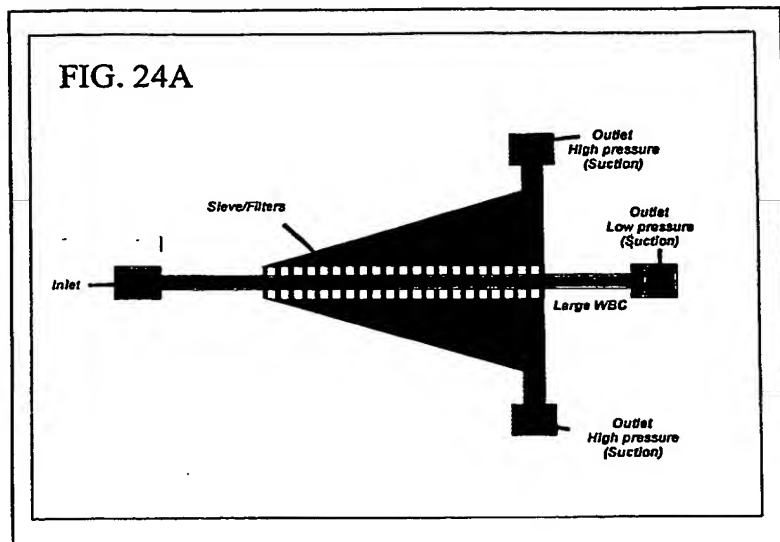
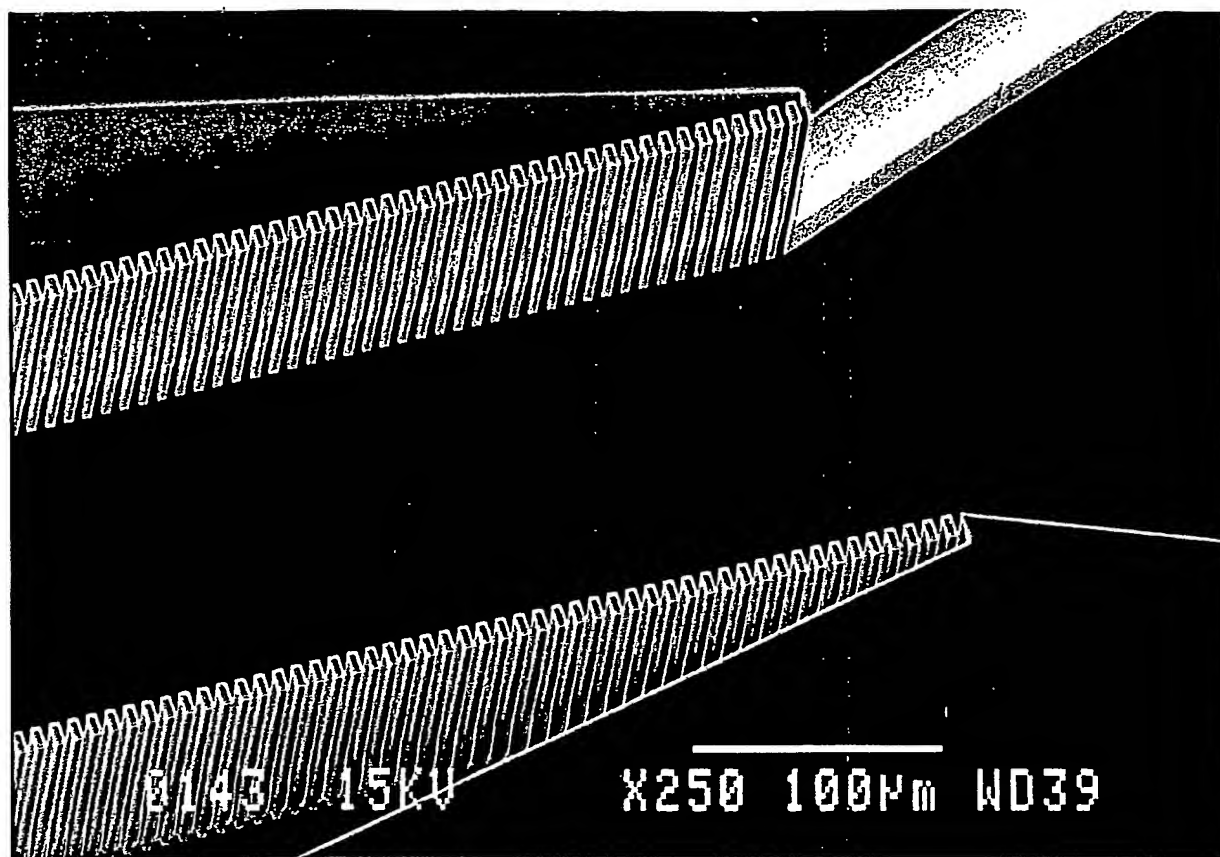
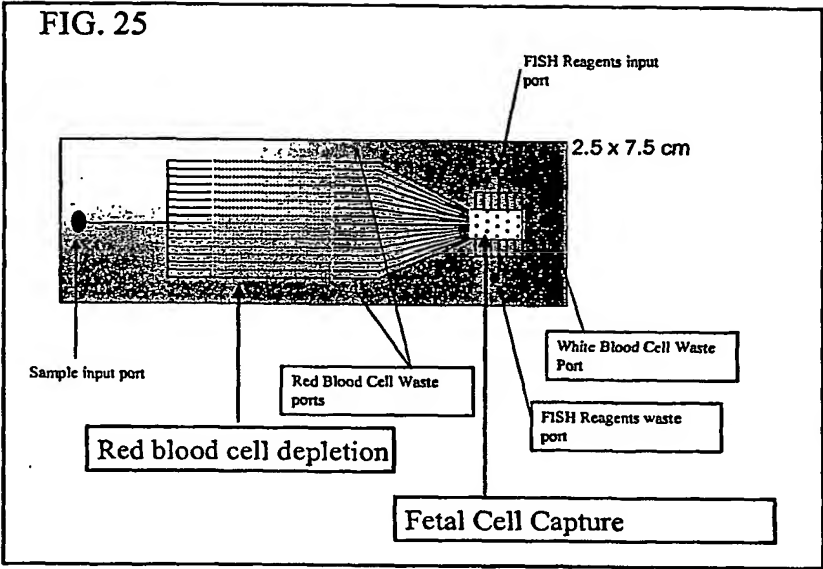


FIG. 24B





**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ ~~FADED~~ TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**